

Packed Cell Volume	<p>A quantitative examination of red blood cells - the volume of the packed red blood cells at the bottom of a haematocrit tube is compared to the volume of the whole blood after centrifugation.</p> <p>Providing the mean volume of the red cells is within reference limits, then it accurately reflects the red cell counts.</p>
Mature Neutrophilia	<p>An increased number of mature neutrophils within circulation and a component of the stress leukogram.</p> <p>An increase in cortisol levels leads to an increased release of neutrophils from the storage pool, giving this biochemical change.</p>
Monocytosis	<p>An increased number of circulating monocytes and a component of the stress leukogram.</p> <p>However, it is not always present in dogs and in generally will not be seen in the cat due to increased cortisol release</p>
Eosinopenia	<p>A reduction in circulating Eosinophils and a component of the stress leukogram.</p> <p>Cortisol causes sequestration of eosinophils in tissues and inhibits eosinophil release from bone marrow.</p>
Thrombocytosis	<p>Increased platelet count.</p> <p>Occurs in 75 -80% of dogs with Cushing's but the significance is unknown.</p>
ALKP	<p>Alkaline phosphatase.</p> <p>Serum ALKP concentrations are increased in over 90% of dogs with Cushing's and can be significantly increased. The increase in circulating cortisol induces a canine isoenzyme which is measured in the serum. It is the most common abnormality seen</p>
ALT	<p>Alanine aminotransferase.</p> <p>Commonly increased in Cushing's but not to the same extent as ALKP. It is thought that ALP increases due to the presence of swollen hepatocytes and glycogen accumulation within the liver, alongside changes to hepatic blood flow.</p>
USG	<p>Urine Specific Gravity</p> <p>Measurement of the concentration of chemicals in urine. The specific gravity increases as the number and size of particles in the urine rises. Most dogs with Cushing's have dilute urine (USG < 1.020) and owners should be advised to obtain a urine sample at home before bringing to a clinic, as hospitalisation can alter drinking and urinating behaviours.</p>
UPC Ratio	<p>Urine Protein-to-creatinine ratio</p> <p>Provides a quantification for proteinuria. The quantity of protein lost in the urine is compared to the amount of creatinine in the urine. A value of <0.5 is classed as normal and anything >2 is classed as significant proteinuria.</p>
ACTHST	<p>ACTH Stimulation Test</p> <p>The ACTH stimulation test is a measure of adrenocortical reserve. The following protocol has been prepared by Dechra in combination with specialist laboratories and using the 2012 ACVIM consensus statement on diagnosis of spontaneous canine HAC. However, if you have any queries, we would recommend checking this protocol with your regular laboratory before carrying out the test.</p> <ol style="list-style-type: none"> 1. Collect a basal fasted blood sample (1-2 ml) and label this tube as 'pre ACTH'

	<p>Suitable sample types at most laboratories include separated heparinised plasma or serum, or centrifuged serum gel tubes</p> <ol style="list-style-type: none"> 2. Immediately inject 5 µg/kg synthetic ACTH IV. 3. Collect a second blood sample (1-2 ml) one-hour post injection of synthetic ACTH. Label tube as 'post ACTH' 4. Submit tubes and request form to the laboratory <p>The synthetic ACTH stimulates the adrenal glands to produce more cortisol, and subsequently levels should increase in the circulation. A normal increase is thought to be to around 300 – 400 nmol/l. A positive test result is normal defined as a 1 hour cortisol >600 nmol/l, in dogs with compatible clinical signs and no evidence of concurrent non-adrenal illness</p>
<p>LDDST</p>	<p>The low-dose dexamethasone suppression test measures the resistance of the pituitary-adrenal axis to suppression by dexamethasone. The following protocol has been prepared by Dechra in combination with specialist laboratories, however, if you have any queries, we would recommend checking this protocol with your regular laboratory before carrying out the test.</p> <ol style="list-style-type: none"> 1. Collect a basal fasted blood sample (1-2 ml) and label this tube as 'pre Dex'. Suitable sample types at most laboratories include separated heparinised plasma or serum, or centrifuged serum gel tubes 2. Immediately inject 0.01 mg/kg to 0.015 mg/kg Dexamethasone I.V. It has been suggested that using 0.015 mg/kg Dexamethasone may help reduce the chance of false positive results. <p>The volume of Dexamethasone to administer in ml = (Bodyweight (kg) x Dose (mg/kg)) / Concentration of Dexamethasone solution (mg/ml). Volumes for injection are small for this test and, in some cases, it can be helpful to make a 1:10 dilution of dexamethasone before administration.</p> <ol style="list-style-type: none"> 3. Collect two further blood samples, 3 hours and 8 hours post Dexamethasone injection. Label the sample times clearly on the tubes (e.g. '3hrs post') 4. Submit tubes and request form to the laboratory <p>The dexamethasone inhibits pituitary ACTH production via negative feedback, resulting in reduced cortisol production by the adrenal glands. Cortisol secretion is inhibited within 2 - 3 hrs and suppression lasts as long as 24 - 48 hrs</p>
<p>UCCR</p>	<p>Urinary cortisol-to-creatinine ratio</p> <p>Provides a quantification for the amount of cortisol in the urine. The quantity of cortisol is compared to the amount of creatinine in the urine.</p> <p>The urinary cortisol : creatinine ratio is performed on a morning urine sample collected at home by the owner. Using a morning sample means that the cortisol concentration will reflect cortisol release over several hours, thus adjusting for normal fluctuations in plasma cortisol concentrations. Collecting the sample at home is less stressful for the</p>

	<p>dog, reducing the likelihood of finding abnormal, stress-related concentrations of cortisol in the urine. Measuring the cortisol to creatinine ratio, rather than just cortisol, provides a correction for any differences in urine concentration.</p> <p>The UCCR is a very sensitive test, and a negative result means that hyperadrenocorticism (HAC) can be excluded with a high degree of confidence.</p> <p>However, the test is very poorly specific and non-adrenal illness or stress commonly gives a false positive result. A diagnosis of HAC must never be based solely on a positive UCCR – further testing (e.g. ACTH stimulation test or low-dose dexamethasone suppression test) must be carried out.</p>
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